JOURNAL OF ICHTHYOLOGY

VOLUME 14

CONTENTS FOR 1974

Number 1

A.A. Kazantseva: The Respiratory Mechanism in the Palaeoniscoidei and Its Evolution in the Subclass Actinopterygii 1

N.A. Gordeyev, A.G. Poddubnyy and L.K. Il'ina: Estimation of the Potential Fish Productivity of a Reservoir 15

Ye.Ya. Gabovich and Ye.M. Malkin: An Attempt to Give Formal Definition to the Biostatic Method of Estimating the Relative Abundance of Food Fishes 20

N.V. Kuznetsov, Yu.A. Gorokhov, I.Ye. Postnov and E.A. Tel'nov: A List of the Fishes of Gor'kiy Province 27

R. Claro, D.V. Radakov, Yu.S. Reshetnikov and A. Silva: Some Features of the Fish Fauna of the Cuban Shelf 33

A.A. Amanov: Ecology of the Bukhara Roach [Rutilus rutilus bucharensis (Nikolskij)] of the Uch-Kyzyl Reservoir in the Surkhan Darya River Basin 40

Wagdi Wadia Fahmi: Size-Weight Characteristics of the Striped Mullet [Mullus borbatus L.] in Research Catches in the Southeastern Mediterranean 46

A.I. Aleksandrova: A Morphological and Ecological Description of the Ruffe [Acerina cernua (L.)] of the Middle Reaches of the Dnieper 53

A.S. Tokarev: Determination of the Permissible Annual Fish Catch by Long-term Planning Program ... 60

K.A. Altukhov and V.M. Yerastova: Biological Characteristics of the Smelt [Osmerus eperlanus (L.)] from the Karelian White Sea Coast 67

M.M. Shikhshabekov: Features of the Sexual Cycle of Some Semi-diadromous Fishes in the Lower Reaches of the Terek 79

N.Ya. Sil'vestrova: Structural Characteristics of the Marginal Ray of the Pectoral Fin in the Beluga [Huso huso (L.)] in the First Years of Life 88

S.A. Yevseyenko and V.P. Serebryakov: Larvae of Diplospinus multistriatus Maul (Pisces, Gempylidae) from the Northwestern Atlantic 92

N.G. Nikol'skaya and I.A. Verigina: Structural Characteristics of the Organs of Feeding and Digestion in Three White Sea Flounder Species in Relation to Food Consumed 99

M.A. Shcherbina and S.P. Tryamkina: Availability to Yearling Rainbow Trout [Salmo irideus (Gibb.)] of Amino Acids from Diets Consisting Largely of Fish Meal and Spleen 109

Ye.A. Pen'kova: Functional Changes in the Interrenal Tissue of Adult Sturgeon [Acipenser güldenstädti (Brandt)] in the Course of the Life Cycle 114

V.A. Dolinin: Environmental Dependence of the Main Parameters of the Respiratory Function in Fishes Differing in Their Activity and Oxygen Requirement 122

Yu.N. Shilkin: Age-Related Changes in the Role of Vision in the Feeding of Various Fishes 133

In Memory of G.S. Karzinkin (1900-1973) 139

BRIEF COMMUNICATIONS

I.A. Trunov: Notes on the Fish Fauna of the Southeastern Atlantic. A Rare Species of Anglerfish [Paroneirodes wedli (Pietschmann, 1926)] 145

M.A. Dyatlov: Some Data on the Biology of the Ladoga Fourhorn Sculpin [Myoxocephalus quadricornis lönnbergi (Berg)] 148

Yu.G. Alekyev and B.V. Kurbatov: The Hydrodynamic Resistance of Live Fishes and Some Other Nekton Organisms in the Inertial Range 151

A.Yu. Neproshin: The Acoustic Behavior of Some Far Eastern Salmon in the Spawning Period 154

G.M. Dukravets and A.I. Machulin: A Morphological Description of the Amur Snakehead [Ophiocephalus argus warpachowskii (Berg)] of the Syr Darya Basin 158

Number 2

The Role of the Academy of Sciences in the Development of Ichthyology 161
G. L. Karasev: Reconstruction of the Fish Fauna in Transbaikalia 164
A. N. Payusova and N. D. Koreshkova: Morphological Characteristics of the Gill Rakers in the Issyk-Kul Dace [Leuciscus schmidti] and [L. bergi] 186
A. N. Poltorykhina: Morphological Characteristics and Variability of the Siberian Lamprey [Lampetra japonica kessleri] from the Upper Irtysh Basin 192
G. V. Fedorova: Morphometric Characteristics of the Baltic Lake Smelt [Osmerus eperlanus eperlanus morpha spirinchus] of Lakes Ilmen and Seliger 203
L. A. Zhakov: The Composition and Successions of Lake Ichthyocoenoses in Relation to the Specific Features of Faunistic Complexes of Fishes 208
V. M. Volodin, F. I. Mezhnin and V. V. Kuz'mina: An Experimental Study of Egg Resorption in the Bream [Abramis brama] 219
A. N. Zhitenev, D. S. Kalinin and Yu. I. Abayev: The State of the Gonads of the Striped Mullet [Mugil cephalus] and the Sharpnose Mullet [M. saliens] leaving Estuaries to Spawn, and Their Reaction to a Pituitary Injection 232
M. P. Statova: The State of the Anterior Pituitary in Phytophagous Fishes Before and After Pituitary Injections 240
T. N. Belyanina: Larval Fishes of the Family Holocentridae in Fish Plankton from the Gulf of Tonkin 248
A. P. Makeyeva and B. V. Verigin: Hybridization of the Pond Carp [Cyprinus carpio] with the Grass Carp [Ctenopharyngodon idella] 254
M. A. Kunin: The Size and Age Characteristics and Feeding of the Eastern Bream [Abramis brama orientalis] of the Aral Sea 260
V. A. Budnichenko: The Feeding of Saurida undosquamis and Saurida tumbil (Synodontidae) along the Oman Coast 267
V. I. Chekunova: The Rate and Level of Metabolism in Fishes of Different Ecological Groups 272
In Memory of P. G. Borisov (1889-1973) 279
D. V. Radakov and A. Silva: Some Characteristics of the Schooling Behavior of Jenkinsia lamprotaenia 283
G. P. Nizovtsev: A Greenland Halibut [Reinhardtius hippoglossoides] Tagged in Eastern Icelandic Waters and Caught in the Barents Sea 286
M. A. Abdil'dayev and A. M. Dubitskiy: The Discovery of Aplocheilus sp., a Species New to the Soviet Fauna, in the Ili River Basin 287
I. Yu. Redkozubov and V. A. Movchan: A Contribution to Study of the Lake Frolikh Char [Salvelinus alpinus erythrinus] 289
M. V. Mina: Some Observations on the Range of the Balkhash Perch [Perca schrenki] and Its Interrelationships with the Common Perch [P. fluviatilis] 292
S. A. Yevseyenko: New Data Concerning Eel Eggs on Georges Bank 294
Z. A. Muravskaya and V. F. Verbitskaya: Determination of the Rate of Nitrogen Excretion in Some Fasting Sea Fishes 298

Number 3

G. V. Nikol'skiy, L. S. Berdichevskiy, A. S. Bogdanov and B. P. Manteyfel': 25 Years of the Ichthyological Commission 303
G. U. Lindberg: The Role of the Academy of Sciences in Study of the Fish Fauna 311
A. N. Svetovidov: Ichthyological Research in the Zoological Institute, USSR Academy of Sciences 319
G. P. Rudenko, A. G. Volokhonskiy, S. G. Tarasova and I. I. Tereshenkov: Intensification of Fish Culture and Its Effect on the Ecology of Small Lakes 326
L. A. Zhakov and V. V. Menshutkin: A Mathematical Model of a Lake Ichthyocoenosis 335
E. P. Tsyplakov: Expansion of the Ranges of Some Fishes in Connection with Hydraulic Engineering Works on the Volga and Acclimatization Operations 343
P. S. Vovk: The Possibility of Using the Bighead Carp [Hypophthalmichthys molitrix] to Increase the Fish Production of the Dnieper Reservoirs and to Decrease Eutrophication . 351
S. K. Troitskiy: The Fish Fauna and Commercial Importance of the Lower Reaches of the Northern Donets 359
I. A. Trunov and A. P. Malevanyy: On the Ecology of Searobins [Triglidae] Off Namibia .. 367
V. I. Pinchuk: New Data on Rhinogobius pflaumi and Rhinogobius similis similis in the Maritime Territory 373
M. G. Talikina: Oogenesis and Sexual Cycle of the Black Sea Turbot [Scophthalmus maeoticus maeoticus] 385
A. M. Kukuradze: A Description of the Spawning Stock and Reproduction of the Pike-Perch [Lucioperca lucioperca] of the Danube Delta and Waters in the Danubian Region 393
M. V. Gulidov: The Effect of Different Oxygen Conditions During Incubation on the Survival and Some of the Developmental Characteristics of the "Verkhovka" [Leucaspius delineatus] in the Embryonic Period 398
A. A. Nesterov: Age and Growth of the North Atlantic Saury [Scomberesox saurus] 404
I. A. Verigina and K. A. Savvaitova: The Structure of the Alimentary Canal in Members of Sympatric Char Populations [genus Salvelinus] from Lake Azabach'ye (Kamchatka) ..

A.V. Kogan and Ye.M. Zaytseva: The Feeding of the Common Caspian Kilka [Clupeonella delicatula caspia morpha tscharchalensis] of Kuybyshev Reservoir 413
O.N. Nasukhov: The Feeding of the Young of Valuable Fishes of the Arakum Waters in the Early Development Stages and the Degree of Similarity of Their Diets 418
S.K. Magomedov, V.I. Chernyshev and I.A. Shekhanova: A Comparative Study of Some of the Physico-Chemical Mechanisms Involved in the Adaptation of Fishes to Different Salinities 426
N.V. Mironova: The Energy Balance of Tilapia mossambica 431
A.A. Yarzhombek and L.B. Klyashtorin: The Relationship between Standard Metabolism and Resting Metabolism in Fishes 439

BRIEF COMMUNICATIONS

T.I. Fursa: Larvae of Champsodon capensis (Champsodontidae, Pisces) from the Arabian Sea 444
T.N. Belyanina and G.R. Lopes: The Occurrence of Bregmaceros nectabanus (Pisces, Bregmacerotidae) in the Caribbean Sea 447
Yu.M. Krivtsov and V.R. Protasov: The Effect of Laser Beams on the Behavior of Fishes .. 449
V.D. Burdak: "Runoff Rills" on Fish Scales 451
A.A. Zhirnova, A.M. Kol'gayev and N.N. Shirokova: The Effect of Basic Cuprous Carbonate on the State of the Liver in Juvenile Amur Autumn Chum [Oncorhynchus keta infrasp. autumnalis] 453

REVIEWS

A.F. Karpevich: Akklimatizatsiya i Razvedeniye Tsennykh Ryb v Yestestvennykh Vodoyemakh i Vodokhranilishchakh Sibiri i Urala (Acclimatization and Propagation of Valuable Fishes in the Natural Waters and Reservoirs of Siberia and the Urals) 457

Number 4

M. Peňáz and S. Lusk: The Past, Present and Future of Czechoslovak Ichthyology 461
Yu.Ye. Lapin: Variability in the Number of Vertebrae and Larval Myomeres in the White Sea Herring (Clupea harengus pallasi natio maris-albi) in Connection with Its Ecology 466
V.V. Zhukov: The Antigenic Links of Some Species of the Genus Coregonus 476
V.A. Rikhter: A Study of the Dynamics of Red Hake (Urophycis chuss) Catches from the Northwest Atlantic by the Method of Simulation 484
V.V. Sukhanov: A Mathematical Model of the Seasonal Dynamics of Weight Increase in Juvenile Sockeye (Oncorhynchus nerka) 491
G.V. Nikol'skiy and N.G. Shubnikova: The Nature of the Interrelationship between Abundance and Certain Biological Characteristics in a Population of the Crucian Carp (Carassius carassius) 496
Yu.Ye. Permitin and Yu.I. Sazonov: The Systematics of Notothenia squamifrons Günther and Related Species 503
K.S. Gaygalas and A.B. Gyarulaytis: The Ecology of the Pike-Perch (Lucioperca lucioperca) in the Kurshyu Mares Basin, the State of Its Stocks and Fishery Regulation Measures 514
G.A. Golovan': The Commercial and Biological Characteristics of the Hake (Merluccius merluccius) of the Southeast Atlantic between October 1969 and January 1970 526
A.D. Gordina, L.A. Duka and L.S. Oven: Sexual Dimorphism, Feeding and Reproduction of Gobius bucchichi in the Black Sea 533
V.A. Kuznetsov: The Adaptive Significance of Changes in the Quality of the Eggs and of Fecundity in the Reproduction of a Population of the Sichel (Pelecus cultratus) 539
I.I. Serobaba: Spawning Ecology of the Walleye Pollock (Theragra chalcogramma) in the Bering Sea 544
E.A. Oyaveyer: The Fecundity of Autumn Baltic Herring (Clupea harengus membras) Populations in the Northeastern Baltic 552
N.V. Somkina: Physiological Considerations Affecting the Time of Release of Juvenile Sturgeon (Acipenser güldenstädti Brandt) 561
A.S. Konstantinov: Ways of Determining the Feeding Rate of Steadily Consuming Fishes 566
P.Ya. Tugarina and V.N. Yel'tsova: The Feeding of the Eastern Carp (Cyprinus carpio haematopterus) and Its Food Relationships with the Indigenous Fishes in Lake Gusinoye (Baikal Basin) 571
O.P. Ovcharov: The Maneuverability of Fishes 582

BRIEF COMMUNICATIONS

Ye.P. Gubanov: The Capture of a Giant Specimen of the Mako Shark (Isurus glaucus) in the Indian Ocean 589
N.N. Litvinenko: Coloration and Other Morphological Characters Distinguishing Juvenile Sebastes fasciatus from Juvenile S. mentella (Scorpaenidae) 591
V.V. Yaremenko: The Ecology of the Tsimlyansk Reservoir Vimba (Vimba vimba carinata) 595
S.V. Kanep: Improvements in Ichthyological Research Methods 599
G.P. Danyulite and Yu.M. Maksimov: Characteristics of the Optomotor Reaction of Fishes Acted upon by a Pulsed Electric Field 604

A.V. Muromtseva: Blood Protein Composition in the Aral Bream (Abramis brama orientalis) 607
E.E. Keysner, V.S. Tot and V.N. Shilov: Characteristics of the Behavior and Biological Cycles of the Marbled Notothenia (Notothenia rossi) in Relation to Bottom Topography, Bottom Materials and Currents 610

REVIEWS

A.F. Koblitskaya: K.R. Fortunatova and O.A. Popva. The Feeding and Food Relationships of Predatory Fishes in the Volga Delta. Moscow, Nauka Press, 1973. 282 pp. 614
M.V. Mina: A.H. Weatherley. Growth and Ecology of Fish Populations. Academic Press, London-New York, 1972, pp. I - X + 1 - 293; 77 Textual Figures 617
V.R. Protasov: Ye.A. Baburina. The Development of the Eyes of Cyclostomes and Fishes in Relation to Ecology. Moscow, Nauka Press, 1972 620
A.N. Svetovidov: K.E. Marshall and C.S. Woods. A Bibliography of the Coregonid Fishes. Fisheries Research Board of Canada, Technical Report, No. 151, 1972, 63 p. I.M. Gruchy and Don E. McAllister. A Bibliography of the Smelt Family Osmeridae. Fisheries Research Board of Canada, Technical Report, No. 368, 1972, 104 pp. 622

CHRONICLE

B.G. Ioganzen: Ceremonial Meeting on the 25th Anniversary of the Ichthyological Commission and Its Annual Plenary Meeting 624
D.V. Radakov and K.A. Savvaitova: The First European Congress of Ichthyology in Yugoslavia (Sarajevo, September 1973) 628

Number 5

D.A. Shubnikov: Ecological Groups in the Scombridae and Their Origin 633
G.Kh. Shaposhnikova: The "Pyzhyan" Whitefish [Coregonus lavaretus pidschian] of the Soviet Union . 649
L.N. Solovkina: The European Cisco [Coregonus albula sardinella] of the Pechora Basin 666
O.F. Gritsenko: Systematics of Far Eastern Rudd of the Genus Tribolodon [-Leuciscus brandti] (Cyprinidae) 677
N.P. Votinov and V.P. Kas'yanov: The State of Stocks of the Sturgeon [Acipenser baeri] in Siberian Rivers and Measures to Increase Their Abundance 689
V.S. Tanasiychuk: The Adaptive Capabilities of the Pike-Perch [Lucioperca lucioperca] 698
K.S. Gaygalas: The Threespine Stickleback [Gasterosteus aculeatus] of the Kurshyu Mares (Courland Lagoon) 706
A.A. Amanov: Morphology and Mode of Life of the Amur Snakehead [Ophiocephalus argus warpachowskii] in Chimkurgan Reservoir 713
Yu.P. Babushkin: A Comparative Morphological Description of Male Rainbow Trout [Salmo irideus] from Different Groups 717
N.G. Timoshek and A.K. Shilenkova: The Nature of the Oogenesis and Spawning of Black Sea Mullet . 727
A.A. Avni and S.G. Soin: Adaptive Characteristics of the Embryogeny of Nothobranchius guentheri in Connection with Existence in Temporary Tropical Habitat 735
T.A. Shiganova: Postembryonic Development of Hygophum benoiti (Myctophidae, Pisces) 746
Yu.V. Tat'yankin: The Effect of the Preliminary Adaptation Temperature on the Distribution of Juvenile Cod [Gadus morhua morhua] and Pollock [Pollachius virens] Within a Temperature Gradient 755
A.F. Timokhina: Feeding and Daily Food Consumption of the Blue Whiting [Micromesistius poutassou] in the Norwegian Sea 760
O.D. Borodulina: The Feeding of the Bigeye Tuna [Thunnus obesus] in the Gulf of Guinea and Its Place in the Trophic System of the Pelagic Zone 765
A.G. Poddubnyy, L.K. Malinin and A.M. Svirskiy: Behavior of the Sevryuga [Acipenser stellatus] Below Federovskaya Dam on the Kuban River 776
N.V. Troshicheva: The Role of the Prosencephalon and Visual Reception in the Food Reflexes of Two Species of Sculpins [Cottidae] in the Barents Sea 784
T.V. Astakhova: The Parasite Fauna of Juvenile Sturgeon of the Volga-Caspian Region 788
A.I. Goryunova: The Use of Cytometric Analysis of the Blood to Study Intraspecific Differentiation in the Common Wild Goldfish [Carassius auratus gibelio] 792

BRIEF COMMUNICATIONS

V.K. Rybachuk: Identification of the Species of the Genus Sebastes from a Bone Found by A.Ya Taranets in Middens of the Ilou Tribe 798
F.K. Gavlena: The "Black-Striped Pipefish" [Syngnathus nigrolineatus], a New Element in the Fish Fauna of the Volga Reservoirs 800
T.Ye. Pashkova: The Occurrence of Spawning Capelin [Mallotus villosus villosus] in Indiga Bay in the Barents Sea 802
T.V. Dekhnik: Comments on the Articles by V.Ye. Zaika and N.A. Ostrovskaya Entitled "Indicators of the Availability of Food to Fish Larvae" 804
M.A. Kunin and M.I. Shatunovskiy: The Relationship between Fatness and Fecundity in the Aral Bream [Abramis brama orientalis] 808

Number 6

V.A. Snythko and V.V. Fedorov: New Data on the Distribution of Scorpaenid Fishes of the Subfamily Sebastinae and Notes on Their Biology 811

V.I. Pinchuk: Alectridium aurantiacum from the Commander Islands and Pseudoalectrias tarasov from the Kuril Islands, and an Unusual Specimen of Stichaeopsis epallax (Pisces, Stichaeidae) 818

V.Ya. Yermokhin: Variation in the Number of Vertebrae in the Spawning Population of the Benthophagic Whitefish with Few Gill Rakers, Coregonus lavaretus, of the Kola Peninsula 824

G.V. Fedorova and S.A. Vetkasov: The Biological Characteristics and Abundance of the Lake Ilmen Ruffe, Acerina cernua 836

G.V. Nikol'skiy and D.D. Aliyev: The Role of Far Eastern Herbivorous Fishes in the Ecosystems of Natural Waters in Which They are Acclimatized 842

A.A. Amanov, F.A. Turdakov (Deceased) and M.D. Devonov: The Turkestan Catfish Glyptosternum reticulatum of the Tributaries of the Amudar'ya 847

Zh.A. Chernyayev: Morphological and Ecological Features of the Reproduction and Development of the "Big Golomyanka" or Baikal Oil-Fish (Comephorus baicalensis) 856

V.I. Ivankov and Z.G. Ivankova: Fecundity of Flounders in the Northwestern Sea of Japan 868

K.A. Altukhov and V.M. Yerastova: Reproduction of the Smelt (Osmerus eperlanus) and the Ecology of its Early Development Stages in Kandalaksha Bay, White Sea 877

A.M. Kutuzov: Repeated Spawning of the White Bream (Blicca bjoerkna) in Sviyaga Bay of Kuybyshev Reservoir 887

L.V. Igumnova: The Time Taken for Beluga (Huso huso) Females of Mature at Different Temperatures Following a Pituitary Injection 890

Atalla Mukheysin Ali: Fecundity and Histological Description of the Gonads of the Female Asp (Aspius aspius) 896

M.P. Boytsov: The Morphology of Underyearling Fishes in the Zone Affected by Warm Waters Discharged from the Konakovo Power Station into Ivan'kovskoye Reservoir 904

S.V. Kaneop: General Features of the Growth and Sexual Maturation of the Whitefish (Coregonus lavaretus) in the USSR 911

A.M. Kukuradze: Food Feeding of Pike-Perch (Lucioperca lucioperca) in the Danube Delta and Neighboring Waters 925

N.Ya. Lipskaya: Metabolic Rates in the Young of Some Tropical Fish Species 934

N.V. Maslennikova: The Amino Acid Composition of Some Fish Tissues 943

I.A. Verigina: The Structure of the Alimentary Canal in Some of the Northern Blennioidei. I. The Alimentary Canal of the Atlantic Wolffish (Anarrhichas lupus) 954

L.I. Smirnova and M.F. Govorova: Osmotic and Chemical Resistance of Fish Erythrocytes 959

I.T. Negonovskaya and G.P. Rudenko: The Oxygen Threshold and Characteristics of the Respiratory Metabolism of Juvenile Herbivorous Fishes—the Grass Carp (Ctenopharyngodon idella) and the Bighead (Aristichthys nobilis) 965

L.S. Krayushkina and V.P. Dyubin: The Reaction of Juvenile Sturgeon to Alteration of Environmental Salinity 971

T.N. Turuk: Fatness and Vertical Migrations of the Atlantic Cod (Gadus morhua morhua) 977

BRIEF COMMUNICATIONS

A.S. Yakovleva and V.M. Shishmarev: A Morphological Description of the Tugun (Coregonus tugun) of the Man'ya River 983

A.F. Gun'ko: The Biological Background of a New Aspect of the Basic Outline of the Hatchery Rearing of Sturgeons (HRS) 986

M.M. Seid-Rzayev and A.P. Alekperov: Some Data on the Development Cycle of the Gonads of the Caspian Roach (Rutilus rutilus caspicus) of the Ural River 989

G.I. Karpenko: The Effect of Salinity on the Eggs and Embryos of the "Shemaya" (Chalcalburnus chalcoides schischkovi) 993

P.N. Shubin and E.V. Kachmarchik: Electrophoretic Studies of Hemoglobin in Two Age Forms of the Pechora Salmon (Salmo salar) 995